

REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks.

Claims 1-14, 16-35, 37-40 are pending in this application. Claims 1, 8, 16, 18, 27 and 37 are independent.

Claims 1-3, 5-14, 16 and 17 are rejected under 35 U.S.C. §103(a) over U.S. Patent No. 6,407,821 to Hohensee et al. ("Hohensee") in view of U.S. Patent Application Publication No. 2002/0171856 A1 to Ackerman et al. ("Ackerman"). The rejection is respectfully traversed.

Independent Claim 1 recites an image forming device comprising, *inter alia*, a receiving unit for successively receiving unconverted constituent data of a document file from an external device, and an image forming unit for forming images of the specific page before all of the unconverted constituent data of the document file have been received from the external device when it is judged by the judging unit that all objects necessary for displaying the specific page are stored in the storing unit. Independent Claims 8 and 16 recite similar features.

The Office Action acknowledges that Hohensee fails to disclose the claimed image forming unit for forming images of the specific page before all of the unconverted constituent data of the document file have been received. The Office Action takes the position that these features are disclosed by Ackerman. Applicants respectfully disagree.

According to Ackerman's configuration, once print data is received by the input buffer 22 from the input port 18, the data is interpreted by one or more interpreters 28 and then communicated to a graphics engine 30 to be rasterized (see Fig. 1 and paragraph [0037] of Ackerman). After rasterization, the print data is

directed by a page queuing system 34 into a page buffer 35 (see Fig. 1 and paragraph [0038] of Ackerman). As an alternative to temporarily storing an entire page of rasterized data in a page buffer 35, Ackerman discloses that the entire page of data may not be buffered at one time, thereby managing to operate with a much smaller amount of RAM in a "partial page buffer" (paragraph [0038] of Ackerman). The partial data within the page buffer 35 is communicated in real time to a print engine 36 (see paragraph [0038]). Ackerman also discloses that a code sniffer buffer 33 receives "chunks" or packets of the print data from the input buffer 22 that actively receives a print job from the input port 18, and that the code sniffer 38 analyzes the data that is placed into the code sniffer buffer 33 (see Fig. 1 and paragraph [0041] of Ackerman).

The Office Action asserts that Ackerman's printer 10 actively receives print data from the input device 24 ("external device") and transfers the print data to the print engine 36 in real time, and thus that it is obvious that printing is started prior to receiving the entire document from an input device 24 ("external device") (see page 3 of the Office Action).

However, the only print data in Ackerman that is communicated in real time to the print engine 36 is the rasterized data *already within the page buffer 35*. That is, the data that is buffered into "partial data" (in the page buffer 35) has already been received by the printer 10 from the input device 24. There is no evidence that this partial print data is communicated to the graphics engine 36 by the page buffer 35 *before* all of the data is received by the printer 10 from the input device 24, i.e., "the external device". Moreover, the partial data within the page buffer 35 is communicated to the print engine 36 *within the printer 10*. The partial data within the page buffer 35 is not communicated to the print engine 36 from the input device 24.

In addition, simply because the code sniffer buffer 33 receives packets of print data from the input buffer 22 that actively receives a print job from the input port 18, as discussed in paragraph [0041] of Ackerman, does not mean that the partial print data is communicated to the graphics engine 36 by the page buffer 35 before all of the data from the input device 24 is received by the printer 10. It simply means that the code sniffer 38 may analyze data that is placed into the code sniffer buffer 33 when the input buffer 22 is receiving a print job from the input port 18.

Thus, the combination of Hohensee and Ackerman fails to disclose, and would not have rendered obvious, the claimed combination of features, including a receiving unit for successively receiving unconverted constituent data of a document file from an external device, and an image forming unit for forming images of the specific page before all of the unconverted constituent data of the document file have been received from the external device as recited in independent Claim 1, and similarly recited in independent Claims 8 and 16. Therefore, independent Claims 1, 8 and 16 are patentable over Hohensee and Ackerman for at least these reasons.

Claims 2, 3, 5-7, 9-14 and 17 are patentable over Hohensee and Ackerman at least by virtue of their respective dependence from the patentable independent claims. Thus, a detailed discussion of the additional distinguishing features recited in these dependent claims is not set forth at this time. Withdrawal of the rejection is respectfully requested.

The Office Action rejects Claims 4 and 11 under 35 U.S.C. §103(a) over Hohensee in view of Ackerman, and further in view of JP-A-09-174955 to Abe. The rejection is respectfully traversed.

Abe fails to overcome the deficiencies of Hohensee and Ackerman. Therefore, Claims 4 and 11 are patentable over Hohensee and Abe at least by virtue

of their dependence from patentable independent Claims 1 and 8, respectively.

Thus, a detailed discussion of the additional distinguishing features recited in these dependent claims is not set forth at this time. Withdrawal of the rejection is respectfully requested.

The Office Action rejects Claims 18, 19, 23-28, 32-35, 37 and 38 under 35 U.S.C. §103(a) over Hohensee in view of Ackerman, and further in view of Abe. The rejection is respectfully traversed.

Independent Claim 18 is directed to an image forming device comprising, *inter alia*, a receiving unit for successively receiving constituent data of the document file from an external device before the constituent data is converted into print data, and an image forming unit for forming images of objects stored in the storing unit before all of the unconverted constituent data of the document file have been received from the external device. Independent Claims 27 and 37 recite similar features.

As discussed above, Ackerman fails to disclose that partial print data is communicated to the graphics engine 36 by the page buffer 35 before all of the data from the input device 24 is received by the printer 10. Thus, Ackerman fails to disclose an image forming unit for forming images of objects stored in the storing unit before all of the unconverted constituent data of the document file have been received from an external device as recited in independent Claim 18, and similarly recited in independent Claims 27 and 37. Further, Abe fails to overcome the deficiencies of Ackerman, and the Office Action acknowledges that Hohensee fails to disclose these features. Thus, independent Claims 18, 27 and 37 are patentable over the combination of Hohensee, Ackerman and Abe for at least these reasons.

Claims 19, 23-26, 28, 32-35 and 38 are patentable over Hohensee, Ackerman and Abe at least by virtue of their respective dependence from the patentable

independent claims. Thus, a detailed discussion of the additional distinguishing features recited in these dependent claims is not set forth at this time. Withdrawal of the rejection is respectfully requested.

The Office Action rejects Claims 20-22 and 29-31 under 35 U.S.C. §103(a) over Hohensee in view of Ackerman and Abe, and further in view of U.S. Patent Application Publication No. 2004/0216048 A1 to Brown et al. ("Brown"). The rejection is respectfully traversed.

Brown fails to overcome the deficiencies of Hohensee, Ackerman and Abe. Therefore, Claims 20-22 and 29-31 are patentable over the applied references at least by virtue of their dependence from patentable independent Claims 18 and 27, respectively. Thus, a detailed discussion of the additional distinguishing features recited in these dependent claims is not set forth at this time. Withdrawal of the rejection is respectfully requested.

The Office Action rejects Claims 39 and 40 under 35 U.S.C. §103(a) over Hohensee in view of Ackerman, and further in view of U.S. Patent Application Publication No. 2002/0067502 A1 to Hansen. The rejection is respectfully traversed.

Claims 39 and 40 are patentable over the applied references at least by virtue of their dependence from patentable independent Claim 1, as well as for the additional features these claims recite.

For example, Claim 39 recites that the judging unit further judges whether or not the document file will be output in a normal order, successively from the first page toward the last page of the document file, or out of order, and the image forming unit forms images of the specific page after an additional judgment by the judging unit of whether the document file will be output in a normal order or out of order.

The Office Action acknowledges that the combination of Hohensee and Ackerman fails to disclose these features, but asserts that they are disclosed by Hansen.

However, Hansen simply discloses that instead of printing an entire document, a section or groups of pages of a document can be printed based on metatags embedded in the pages (see paragraphs [0013], [0031]-[0033], [0042] and [0050] of Hansen). Nowhere does Hansen disclose or suggest judging whether a document file will be output in a normal order, *successively from the first page toward the last page of the document file, or out of order* (i.e., with a higher-numbered page printed before a lower-numbered page). Thus, Claim 39 is patentable over the applied references for at least this additional reason.

Withdrawal of the rejection is respectfully requested.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

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